

ZHAO ET AL.
"GPS Assistance Messages in Cellular
Communications Networks And Methods Therefor"
Atty. Docket No. CS90038

Appl. No. 09/785,960
Confirm. No. 2853
Examiner K. Ferguson
Art Unit 2682

Request for Reconsideration, Informal Matters, Claims Pending

The non-final Office Action mailed on 30 November 2005 has been considered carefully. Reconsideration of the claimed invention in view of the amendments above and the discussion below is respectfully requested.

Claims 1-10, 16-18 and 25-28 are pending.

Response to Non-Statutory Subject Matter Rejection

Rejection Summary

Claims 16-18 stand rejected under 35 USC 101 as being drawn to non-statutory subject matter allegedly because the ephemeris data issue identifier is "... considered to be functional descriptive material.

Discussion

This rejection, was first raised in the Office Action of 10 March 2005, then apparently withdrawn in the final rejection of 5 October 2006 in response to Applicants' amendment in the 37 CFR 1.111 response filed on 8 July 2005. The Examiner has now curiously re-asserted the rejection under 35 USC 101.

In response, Claims 16-18 have been further amended to recite a "...satellite positioning system ephemeris data issue identifier signal modulated on a wireless carrier signal...." The "signal" is now embodied on a wireless carrier signal so that the data structure may be received by a radio

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receiver and processed by a processor. Claims 16-18 are now drawn indisputably to a signal claim directed to a practical application of electromagnetic energy. The claimed ephemeris data issue identifier includes a "first field with satellite identifier data" and a "second field with an ephemeris sequence number". The "ephemeris data issue identifier signal" is used to indicate when the mobile station needs to read and store a corresponding ephemeris data (e.g., by obtaining an ephemeris assistance message from the network). See MPEP 2106, IV, B(c) "Natural Phenomena Such as Electricity and Magnetism". Thus the subject matter of Claims 16-18 is statutory. Kindly withdraw the rejection under 35 U.S.C. 101.

Allowability of Claims Over Kingdon & Pratt

Rejection Summary

Claims 16-18 stand rejected under 35 USC 103(a) as being anticipated by Publication No. US 2001/0014604 A1 (Kingdon) in view of U.S. Patent No. 6,611,756 (Pratt).

Discussion of Claim 16

Regarding independent Claim 16, Kingdon and Pratt fail to disclose or suggest a

satellite positioning system ephemeris data issue identifier signal for transmission to a satellite positioning system enabled mobile station in a cellular communications network, the satellite positioning system ephemeris data issue identifier signal comprising:
a first field with satellite identifier data; and

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a second field with an ephemeris sequence number.

The Examiner concedes that Kingdon fails to disclose "... a first field with satellite identifier data; and a second field with an ephemeris sequence number..." The Examiner's reliance on Pratt to meet the deficiencies of Kingdon however is misplaced.

Pratt discloses a terrestrial base station (10) that receives and compresses ephemeris data from GPS satellites. In Pratt, the ephemeris data is compressed from 900 bits to 408 bits wherein the compressed ephemeris data includes orbital data for a shorter time duration (10-20 seconds) compared to than the uncompressed data, which provide up to 4 hours of orbital data. Pratt, col. 2, line 62 – col. 3, line 23. FIG. 2 of Pratt illustrates the compressed ephemeris data set, which includes orbital data (position, velocity, acceleration, jerk) among other ephemeris data. Pratt fails to disclose an "ephemeris data issue identifier" including satellite identifier data and ephemeris sequence number. The compressed ephemeris data of Pratt does not an "ephemeris sequence number". Moreover, there is no reason to for Pratt to include the ephemeris sequence number since Pratt the message of Pratt includes the ephemeris data. Claim 16 and the claims that depend therefore are thus patentably distinguished over Kingdon and Pratt.

Discussion of Claim 17

Regarding Claim 17, Kingdon and Pratt fail to disclose or suggest the ephemeris data issue identifier signal of Claim 16 wherein "... the first field is at least 5 bits, the second field is at least 3 bits." Pratt uses a full byte to identify the space vehicle. Farley refers to the frames that make up the actual

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ephemeris data. Farley nevertheless fails to disclose providing a satellite identifier data using 3 bits. Claim 17 is thus further distinguished over Kingdon and Pratt.

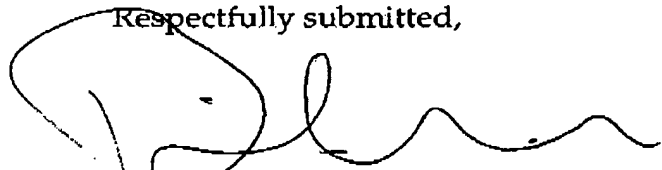
Discussion of Claim 18

Regarding Claim 18, Kingdon and Chen fail to disclose or suggest the ephemeris data issue identifier signal of Claim 16 is a "broadcast message". Claim 18 is thus further distinguished over Kingdon and Pratt.

Prayer For Relief

In view of the amendments and the discussion above, the Claims of the present application are in condition for allowance. Kindly withdraw any rejections and objections and allow this application to issue as a United States Patent without further delay.

Respectfully submitted,



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